

**DUAL CURE COATING COMPOSITION  
AND PROCESSES FOR USING THE SAME**

ABSTRACT

The coating composition comprises a radiation curable component (a1), a thermally curable binder component (a2), a thermally curable crosslinking component (a3), and optionally, one or more reactive diluents (a4). Radiation curable component (a1) is polymerizable upon exposure to electromagnetic radiation and comprises at least two functional groups (a11) comprising at least one bond activatable with electromagnetic radiation. Thermally curable binder component (a2) is polymerizable upon exposure to heat and has at least two functional groups (a21) which are reactive with functional groups (a31). Third component (a3) comprises at least 2.0 functional groups (a31) which are reactive with functional groups (a21). The value of  $^{UV}_{TH}$ , the nonvolatile weight ratio of the sum of radiation curable component (a1) and optional reactive diluent (a4) to the sum of thermally curable binder component (a2) and thermally curable crosslinking component (a3) is from 0.20 to 0.60. Also disclosed are coated surfaces having both optimum porosity sealing and adhesion.

TOP SECRET - GOVERNMENT USE ONLY

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